($p < 0.001$ for both) from post-index (mean = US$4288.80, and US$2581.77 respectively). **CONCLUSIONS:** Approximately one in ten patients receiving care for epilepsy in an emergent setting presents with co-occurring injuries according medical claims. The cost of care for possible re-establishment of epilepsy control and treating co-occurring injuries is significant when compared to the time period prior to seizure.

PND2

HUNTINGTON'S DISEASE: WHERE HAVE WE BEEN?

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OBJECTIVES: The completion of the genome project was expected to lead to treatments for genetically-linked disorders. In many cases this has not occurred. Our aim was to investigate the published research in one such disorder, Huntington's disease (HD), in order to assess the current knowledge in this area. **METHODS:** A systematic search of Medline was conducted using a search filter for RCTs alongside keyword search strings for HD. Identified citations were first- and second-passed by two reviewers to determine inclusion/exclusion and reconciled by a third where decisions disagreed. Top-line data relating to treatment, included patients, and outcome was then extracted by two reviewers based on the abstract only. Differences were reconciled by a third reviewer. keyword search strings for HD. Identified citations were first- and second-passed by two reviewers to determine inclusion/exclusion and reconciled by a third where decisions disagreed. Top-line data relating to treatment, included patients, and outcome was then extracted by two reviewers based on the abstract only. Differences were reconciled by a third reviewer. **RESULTS:** A total of 397 probable RCTs were identified: 262 were excluded as non-RCTs and 135 included for extraction. Twenty-seven abstracts were unavailable, thus the final analysis is based on 108 studies. Of these studies, 29 were conducted in Europe, 29 in USA, 2 in Mexico, 2 in Israel, and one in Australia and Canada. The remaining studies did not state country of origin. Across all included studies 67 treatments were investigated, with between 3 and 537 patients enrolled. Almost all studies enrolled 30 individuals or less. Fifty-five studies reported that the intervention(s) was effective; 41 reported no efficacy (12 did not report the results). **CONCLUSIONS:** The majority of research in HD has been conducted in Western Europe and the United States. A wide variety of potential treatments have been investigated, many of which were ineffective for the treatment of HD. However, most research enrolled few patients and may thus lack power to detect any treatment effects. To date no genetically-related treatments have been developed, which is surprising given the identification of the HD gene in 1993. Further research into a cure for HD is warranted.

PND3

ANTI-EPILEPTIC MEDICATION DRUG FORMULATION CHANGES AND THEIR RELATIONSHIP TO OUTCOMES (AMBULANCE, EMERGENCY DEPARTMENT AND INPATIENT EVENTS)

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OBJECTIVES: To determine whether epileptic patients with evidence of an epilepsy-related inpatient, emergency department, or ambulance treatment claim (defined as an event) and matching epileptic patients with no evidence of an event differ with respect to anti-epileptic medication drug formulation changes (either brand to generic switching or switching between "A-rated" formulations). **METHODS:** A retrospective case control design analysis was conducted utilizing PharMetrics® claims between January 2005 and June 2007. Cases were identified using an ICD-9 code of 345.xx and had an epileptic event requiring a subsequent service code for any of the three care settings of interest. All patients (cases and controls) were between 12 and 64 years of age, had continuous coverage for at least 6 months and ≥145 days' supply of medication prior to their index date. Statistical analyses were conducted using SAS®. **RESULTS:** There were 11,360 patients that met inclusion criteria for analysis (991 cases and 10,369 controls). When controlling for age, sex, region of the country, and type of seizure diagnosis, the odds ratio of the occurrence of an event between those who switched medication and those who did not was 1.91 (CI = 1.53 to 2.39). In addition, a propensity score calculation was conducted to select 991 matched controls for the case group. When performing a logistic regression using the same variables as above, only switching was still a significant predictor of an event (odds ratio = 1.45; CI = 1.04 to 1.93) **CONCLUSIONS:** This analysis found an association between patients receiving epilepsy care in an emergency department, ambulance, or inpatient setting and the prior occurrence of formulation switching involving A-rated anti-epileptic generic medications.

NEUROLOGICAL DISORDERS—Cost Studies

PND4

GLATIRAMER ACETATE VERSUS INTERFERON BETA-1B FOR SUBCUTANEOUS ADMINISTRATION: A COMPARISON OF OUTCOMES AMONG MULTIPLE SCLEROSIS PATIENTS

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OBJECTIVES: To compare outcomes of multiple sclerosis (MS) patients treated with either glatiramer acetate (GA) or interferon beta 1-b (IFN-β-1b) for subcutaneous administration. **METHODS:** Data were obtained from i3's Lab Rx Database from July 2001 to June 2006. We established an "intent-to-treat" (ITT) cohort (N = 842) of patients diagnosed with MS who began therapy on either GA or IFN-β-1b and had continuous insurance coverage from 6 months before to 24 months after the date when they began taking the medication. We also created a "continuous use" (CU) cohort (n = 418) of individuals who, in addition to the criteria above, used either GA or IFN-β-1b within 28 days of the end of the two year post-period. Using multivariate regressions, we examined both the two-year total direct medical costs and the likelihood of relapse associated with the use of each of these MS medications. We defined relapse as either being hospitalized with a diagnosis of MS or being diagnosed with MS during an outpatient visit and then prescribed steroids within a 7-day period. All regression analyses evaluated a wide range of factors that may affect outcomes. **RESULTS:** In the ITT cohort, compared to those who started therapy with IFN-β-1b, patients who started therapy on GA had a significantly lower two-year risk of relapse (13.54% v 5.31%; P = 0.0006). In the CU cohort, compared to those who used IFN-β-1b, patients who used GA also had a significantly lower two-year risk of relapse (10.919% v 2.09%; P = 0.0018) and significantly lower total medical costs ($53,185 v $48,130; P = 0.0345). **CONCLUSIONS:** Results from this study indicate that, compared to the use of IFN-β-1b, GA use is associated with significantly lower probability of relapse. Additionally, when comparing continuous users of GA or IFN beta-1b, there were significantly lower two-year total direct medical costs associated with GA use.